

STIC Biotechnology Systems Branch

RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/537,839
Source: PC/10
Date Processed by STIC: 6/16/05

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-0221

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 4.2.2 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker/chkrnote.htm>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/ebc/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. Hand Carry, Federal Express, United Parcel Service, or other delivery service (EFFECTIVE 01/14/05):
U.S. Patent and Trademark Office, Mail Stop Sequence, Customer Window, Randolph Building, 401 Dulany Street, Alexandria, VA 22314

Revised 01/24/05

BEST AVAILABLE COPY

Raw Sequence Listing Error Summary

ERROR DETECTED

SUGGESTED CORRECTION

SERIAL NUMBER:

10/537,839

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

- 1 ☐ **Wrapped Nucleics
Wrapped Aminos** The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."
- 2 ☐ **Invalid Line Length** The rules require that a line not exceed 72 characters in length. This includes white spaces.
- 3 ☐ **Misaligned Amino
Numbering** The numbering under each 5th amino acid is misaligned. Do not use tab codes between numbers; use space characters, instead.
- 4 ☐ **Non-ASCII** The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.
- 5 ☐ **Variable Length** Sequence(s) _____ contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.
- 6 ☐ **PatentIn 2.0
"bug"** A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) _____. Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.
- 7 ☐ **Skipped Sequences
(OLD RULES)** Sequence(s) _____ missing. If intentional, please insert the following lines for each skipped sequence:
(2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
(i) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading)
(xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
This sequence is intentionally skipped

Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.
- 8 ☐ **Skipped Sequences
(NEW RULES)** Sequence(s) _____ missing. If intentional, please insert the following lines for each skipped sequence:
<210> sequence id number
<400> sequence id number
000
- 9 ☐ **Use of n's or Xaa's
(NEW RULES)** Use of n's and/or Xaa's have been detected in the Sequence Listing.
Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present.
In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.
- 10 ☐ **Invalid <213>
Response** Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or is Artificial Sequence
- 11 ☐ **Use of <220>** Sequence(s) _____ missing the <220> "Feature" and associated numeric identifiers and responses.
Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section.
(See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)
- 12 ☐ **PatentIn 2.0
"bug"** Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.
- 13 ☐ **Misuse of n/Xaa** "n" can only represent a single nucleotide; "Xaa" can only represent a single amino acid

AMC - Biotechnology Systems Branch - 09/09/2003

BEST AVAILABLE COPY



PCT

RAW SEQUENCE LISTING

DATE: 06/16/2005

PATENT APPLICATION: US/10/537,839

TIME: 10:18:53

Input Set : A:\pto.da.txt

Output Set: N:\CRF4\06162005\J537839.raw

IN 3 <110> APPLICANT: THE CORPORATION OF THE TRUSTEES OF THE ORDER OF THE SISTERS OF MERCY

4 QUEENSLAND

6 <120> TITLE OF INVENTION: NOVEL THERAPEUTIC MOLECULES AND USES THEREOF

8 <130> FILE REFERENCE: 12381870/TDO

C--> 10 <140> CURRENT APPLICATION NUMBER: US/10/537,839

C--> 10 <141> CURRENT FILING DATE: 2005-06-06

10 <150> PRIOR APPLICATION NUMBER: 2002953223

11 <151> PRIOR FILING DATE: 2002-06-12

13 <160> NUMBER OF SEQ ID NOS: 32

15 <170> SOFTWARE: PatentIn version 3.1

pp 12-13

**Does Not Comply
Corrected Diskette Needed**

ERRORED SEQUENCES

3362 <210> SEQ ID NO: 32

3363 <211> LENGTH: 32460

3364 <212> TYPE: DNA

3365 <213> ORGANISM: human

3367 <400> SEQUENCE: 32

P. 12

3368	atttttttta	actgggtcat	ttgttttcac	gttgttgagt	ttagacttga	ttttatagaa	60
3370	ctcttttgcc	aatgacatga	ggcttaaaca	agcacccttg	cttgaccctg	gctagtgttg	120
3372	tccagaggcc	ctcatgggtg	aagtataatt	gcacagttta	tgcatacatt	gtagcaaaaca	180
3374	tagcttaaa	actcttcac	caggagctgg	taacagagaa	aagttgtcta	agagacatag	240
3376	tccactgaaa	gggtgtcttg	aaaaggagga	ttctggccag	tagatccaaa	gaagaaggct	300
3378	ggcaaacgcc	accttaacca	actgatccaa	gttaacatca	gtgatgagac	atcgacatct	360
3380	tgtccttctc	gagcacgtac	atcacttctg	gggaactctt	tcccaaaaaa	gcgcaacctg	420
3382	aatccaatta	gaaggaaaatg	tcagacaaaa	tgaaaactgag	ggacattcta	caaaacgact	480
3384	ggccagtact	ttttaaatgt	ggtttgatcg	tgaaaagaaa	agaatgacag	agaaccgtcc	540
3386	tagattaaa	ggagactaag	gagacacgac	atgcaatgta	tgatcctgga	ttgaatcttg	600
3388	gaacagaaaa	ggacccttag	aggggcaatt	aatgaaatgt	ggtaagtgtg	gtagattagc	660
3390	taatcgcat	atcccagtg	gagtgccctg	tgtttgatca	ctgcactggc	gttatataca	720
3392	atgtcaatat	ttagagaagc	tggctgaagg	gttacggaaa	tctcttgtgc	tgtttttgca	780
3394	acattttcga	aagtcctaaa	ttatttcaat	tcaaatgaaa	agtttaaaaa	acaaaaatta	840
3396	gaagttccag	aaggccgcgc	gccagccgct	cctgcgggac	gggacacccg	ggttctcctg	900
3398	gtgggagccc	ccagtgccgt	tcacgttccg	cccggggggg	ggattaaact	cgcacgcgag	960
3400	aagcaccgcc	cccgtctccg	ccccgccccg	ctcctctccg	gccgcgcagc	cgctgccgcc	1020
3402	caccgcgacc	cgccgtcatg	ctccggggccg	cgctgccgcg	gctcctgctg	ccgttgctgg	1080
3404	gcctcgccgc	tgtgtccgtc	gcgggtaagc	ccttacgtag	tccctcgccg	ggaccgtgcg	1140
3406	cgaccgcctt	cgcccccttc	ccaacgcacg	ctcttcgtcc	ccgcgcaccc	gagggcggcc	1200
3408	cgcagacgca	acaccgggcc	ggccatcccc	cccttccttg	cacgcccgtc	ccccgtgggt	1260
3410	cctggctccg	ggtcacctct	caccgccttg	ccctcgggga	ggggaggtgg	ccgagaataa	1320
3412	gggagggctc	tgtcttcttc	ggagtccaca	tcctcaccgc	agaccccact	ccgcggggag	1380
3414	ggaaccccca	aattaggcca	gttgggccga	gaactgaggg	acttggagtc	gcacgacggg	1440

RAW SEQUENCE LISTING

DATE: 06/16/2005

PATENT APPLICATION: US/10/537,839

TIME: 10:18:53

Input Set : A:\pto.da.txt

Output Set : N:\CRF4\06162005\J537839.raw

3416	cgccggtttca	gggcaatttc	gggctgaaat	gagaagcggg	gacgttggtg	gcgatttccc	1500
3418	ctgctgggtgc	gcgcccgagg	tgggggtgct	gggatggggg	tgggggcccg	aggaagtagg	1560
3420	ccctcttttg	caagcagcgc	tgtttgtcta	gttggttggt	gttcaagttg	tttaaacagg	1620
3422	aaaacagttc	agccaaataa	cccctggatg	gaagaggaac	gggaataggc	aaagcttga	1680
3424	tttactgaa	atcaaggagt	tttaaagttc	tagtctgctg	ttgtgcaagt	gacatctgaa	1740
3426	aatcacaca	cgtgatcatt	catttacaaa	acgactcgtg	aggaaaatgc	acaattctat	1800
3428	tgaccgtggg	ctttattttt	aaaaaatttc	catacaagca	tgtcaaaaat	atgtggatgg	1860
3430	ggagactctg	gagaacacag	acttccaaaa	acaccactga	ctgaataatt	ccaggaatta	1920
3432	aagagcaaaa	taaacaagaa	ctaaatgagt	acttgtgtgg	gcttaaataa	agtgcagag	1980
3434	atttaaataa	aatgcaagag	attccccccc	cccacccctt	gccccagatt	tcactgcggt	2040
3436	tttataataa	ctgcctgctc	gaagtctact	gacaggaata	tttcagtggg	cctcagtgtt	2100
3438	ggaggcagca	gcagctcaga	acttggatac	aaacccaagg	ttcctttctt	gaaaacttct	2160
3440	gtggacctgc	atztatgact	ggttgtgaca	tctgctgcct	atcaaagggg	cagaaacaag	2220
3442	atgtgcccac	gttcacattg	ttcagactgg	gaacattaat	tttgtctaag	acaaagctgg	2280
3444	gctgtctctg	aacctcctt	ctgcacaccc	tcattttgcg	agccagtaac	atctcaactc	2340
3446	tcatgtaaac	cacctctg	gaggctgtgc	atttgtactt	taggctagtc	gaattttctt	2400
3448	gtcagatttt	tctttcttgt	cagactttta	aagaaaatca	gtttctagat	tttggtatgt	2460
3450	ctcttcttca	gtgaagctgt	tttgaccagc	aatagagggc	aaatttccct	ttggaaattt	2520
3452	ttgtgcattt	cctttgataa	gtccagtgtg	gatcaatagg	cttttcaaga	gctttagaaa	2580
3454	agtgcacgat	gaataaatta	atgttaatta	atcagctcct	cccagtcagg	aagctttaag	2640
3456	gattaatttg	gaaatgagtg	tgagctttga	cctagctagt	taaccaactt	atctgcactt	2700
3458	cagtaaaaca	gagataatac	ttactcatgg	ggctattggg	agcattaagt	gggaactcca	2760
3460	cgtctagtc	ctattacagg	cgtggttcat	cttggtttcc	ttccctttat	tctcttcata	2820
3462	caaatgaag	ggtaattgtt	gcaaccagaa	aacgtatgaa	taccacctta	tgtatattgg	2880
3464	atgtttatgg	ttactgaaca	cattcatatg	tatgctaata	ttatagggct	gaaaaactaa	2940
3466	gtgtgttttt	cataatactt	tacaaatctc	ccatccaagc	aagatcaggg	gtcatatttg	3000
3468	gcttagaact	aagtcaagaa	agagtttgtt	gctgaatacc	aagatcttaa	tagaaaagct	3060
3470	cttatgatgt	tgcataataa	atatgggtat	tgcataataa	tgtgatgttg	aaacggaaat	3120
3472	cattgttatt	gtctgtcatt	ctggagggtta	ttagtgaagt	gatcttaacc	ttgttcttag	3180
3474	ctattatttt	gaaaatcaca	gtggacaaaa	cattctttta	attcctgagt	gaaaatccat	3240
3476	ggcatcgctt	taaaaagttt	ttccgtaagg	gtgcttaagc	acataataga	tgatcagtat	3300
3478	gtatttattt	ggtcagtggt	ttcctatgcc	tggcatgagc	tgagtgaaca	agcatgttcc	3360
3480	gagtaagtc	tcattctgtg	atcatcatgt	ggatcagaat	ctagggattt	tgaattgcc	3420
3482	tgtcctacaa	gccttagatg	aggtgcctct	gccttcttcc	ctgatgtcat	ctcttaccac	3480
3484	ccttcttggc	attcactctg	tgtatccaca	gagtaaacag	tatctgggta	ctccaacacc	3540
3486	tctggtcctt	ctgtgcacac	caccttcccc	cagtccttgg	catggctgcc	cccacctcca	3600
3488	ccattcagat	ctctgttcat	atgtcacctt	ctccgaagcc	tccctgaaca	cccacattct	3660
3490	ctgtcacatg	tccatgtttt	atcttttcca	agcctttctg	aatgcattgt	gtttattcat	3720
3492	ctgtcttgt	tgttgcctt	cttaccagg	gaaagaagct	ccataacaga	gattttacca	3780
3494	tcttgtggat	ttttgttttg	ttttgatttg	tgtctctgca	ctttattcta	agttataata	3840
3496	aaaggatgaa	aaaatttagg	tgagttattt	aaaaagtagg	taggataagt	ggattgcaat	3900
3498	ttttttcaaa	ttatattacc	tctgctatgc	actcatttca	taatgaattc	aaagccttaa	3960
3500	atcatcttaa	tctattgctg	ccaccttttc	tttctttctt	tttttttttt	tccgagatgg	4020
3502	agtctcactc	tgtcacccag	gctggagtg	ggtggcgcaa	tctcggtcca	cagcaacctc	4080
3504	taccttctgg	gttcaagcaa	ttctcctgcc	tcagcctccc	gagtagctgg	gattacaggc	4140
3506	atgcgccacc	atgcctggct	aacttttgta	tttttagtag	agatgggggt	tcaccatgtt	4200
3508	ggccaggctg	gtctcaaa	cctggcctcg	tgatctgccc	acctcgccct	cccaaagtgc	4260
3510	tgggattaca	ggtgtgagcc	accgtgccc	gcctgatgcc	accttttctg	actcttgtgt	4320
3512	atggcacagt	tatgtttcag	gggaaattat	ctcagattaa	atattagagt	attttaaaat	4380

RAW SEQUENCE LISTING

DATE: 06/16/2005

PATENT APPLICATION: US/10/537,839

TIME: 10:18:53

Input Set : A:\pto.da.txt

Output Set : N:\CRF4\06162005\J537839.raw

3514	aaatttttgag	ctgggctggtg	tggtctcacgc	ctgtaatccc	agcacttttgg	gaggccgagg	4440
3516	cggttgatc	acgagggtcag	gagatcgaga	ccatcctggc	taacacggtg	aaacctgtc	4500
3518	tctactaaaa	atacaaaaaa	ttagccgggc	gtggtggcag	gcacctgtgg	tcccagctac	4560
3520	tcaggaggct	gaggcaggag	aatggcgtga	acccaggaga	cagagcttgc	agtgaagctga	4620
3522	gatcgcgcca	ctgcactcca	gcctgggcga	cagagcgaga	ctcagtctca	aaataaataa	4680
3524	atgaataaat	aaataaataa	ataaataaat	aaattaatta	attttgaaat	gttaatgttt	4740
3526	atttttcttc	caatgaaaaa	gtgaaatttc	aattaggtat	tatttcagga	cttcttttac	4800
3528	tggtgagaat	cttttaacaa	tttgcttatg	tggtgaaaac	tagttttgca	gcaagggttac	4860
3530	tttccataat	ttttattgtg	catatcaagt	atttcattcc	ttctgtgggt	tatttagtgt	4920
3532	tttttttttt	attattttat	tttattttat	tttattttat	tttattgttt	tgagacaggg	4980
3534	cctcactctg	tcacccaggc	tagagtgcag	tggtgcaatc	atggctcact	acagccttga	5040
3536	cctgctgggc	tcaagtgatc	ctcccacctc	agccccctga	gtagctggga	ctacaggtgc	5100
3538	atgccaccat	gccctgctaa	tttttttttt	ttttttttgt	agaggtgggg	tctcactttg	5160
3540	ttgccaggc	tagtcccaa	ctcctgagct	caagtgatcc	tcctacctca	gccttccaaa	5220
3542	gctctgggat	tacagggtgtg	aactgccacg	cctggcctat	tttagatttt	gagagcaaat	5280
3544	cttgagacca	aactctttaa	aaatagacca	gtgatgccc	aagagaaagg	tacagattaa	5340
3546	caatggcaca	ccccctctat	gaatatacat	tataacagcc	cttctgaaga	gggaagtgat	5400
3548	gggacaatat	ggagatggat	gtcttgaaaag	ctagattggg	aagagtgata	tggagagggg	5460
3550	atgaggtgtc	agagtgcctc	aatttatttg	ggattcagag	agatcttgaa	gctcagagta	5520
3552	cagccacaga	atctctggat	tagtcaggga	cttggaacag	ccactccctc	ctccatacat	5580
3554	tataaatgta	ataaatagcc	cctcttcttc	atctgtctgt	gccacagttg	cccttgcgga	5640
3556	agttatgtga	ctacaactca	tatcttaatg	ggagaggagc	aaaggtctta	ttattgacaa	5700
3558	tgaaaatgaa	aaagaagtct	ttcccttttc	ctttgttaac	atttagaaca	agtatgtccc	5760
3560	aagaatcact	tcctcatgct	gtgctgtttt	tttttttctt	tttttaaaaa	aaagagagac	5820
3562	agagaactta	taaaggaaca	gagagttcta	ttagatttga	ctggtaaatgc	aaagtattcc	5880
3564	tgtggatatg	acattatctt	cttttagcac	atgataattt	taggcagagg	atctatatag	5940
3566	aaacttttgg	agttatgcta	agtacagctt	ttaaaaatatt	catgaggctc	ctgaatttct	6000
3568	gtacgtatta	aagaattata	aaattataaa	atccctaaga	gtcattttaag	tgcattatta	6060
3570	ataacaacct	atcattcagg	actgctgtga	agaaataaga	gtaataggcc	ctttgcagag	6120
3572	agcttagtgg	gcaggttttt	aattatatta	ggattatggc	aaagatactt	agcgttgaa	6180
3574	acgacttagt	ttagtctttt	gttcatgagg	tgcatgaacg	tcaacaatct	cctcacagga	6240
3576	gttatccagc	ctctatttga	gcactgttct	tctcaaagta	aaaatatatc	ttttgagtag	6300
3578	tgcttaaaac	tgttttctgg	ggcacacctc	ctgatcgggg	atctatagca	tgagaaaagg	6360
3580	ggttccatgt	tgaattaaact	ggagttactg	ctaagtctga	aatgagccta	aggagaaggc	6420
3582	agttgaaagt	tttggggaag	tgagtcaaca	gtctgttttc	tatttttcta	tacataccct	6480
3584	gttaaaaaaa	aatttttttt	tggtcttgtc	acatgcagat	gctcctcgac	ttagaatggg	6540
3586	gctatatccc	aataaaacttg	tgaagtcaaa	aaatcgtaag	ttgtccatta	ttaagtctcg	6600
3588	gaccatttct	gtattgctaa	cttagttatt	cagcaatggg	ctttgagtag	ctggttatca	6660
3590	ttatcatcat	catagtcatt	cccatactgt	gcaacacagt	agcattgtgt	ttgtcctcc	6720
3592	ctctgtttgc	ctgaaatatt	catgtgactt	ctttccctat	cttttcagac	acacacacac	6780
3594	acacacacac	acacacacac	acacacacac	acagagtggg	ttctctgttt	ctctggagaa	6840
3596	ccctgactaa	tacaataacc	aataagatag	tatggaaata	agacagtgtg	acaatcaagg	6900
3598	ctggattgta	tgaagcattg	catatccacc	tttgccctcc	tttgaatcac	tcactctggg	6960
3600	ggaagctacc	tgccatgtca	taaggaccct	caagcaccct	tgtgtagaag	tccacgtggg	7020
3602	gaggaaactgt	ggtgtcctgc	ccacagccag	caccagctca	ccaccatata	gagtggaggct	7080
3604	tcttgaagct	gacctttcag	ctccagttca	gtgttttagat	ggctgcagcc	ctagccagca	7140
3606	tcttctactgt	aacttcatgg	agaccccaag	ccagaatcac	ccagacaagc	aactgcttca	7200
3608	gaattcctga	cccagagaaa	ctgtatataa	taagtgtttc	ttgttttaag	ctgctaattt	7260
3610	tttacatagc	aatagaccac	aatacaccat	ctaacaatatt	attttatgta	tttgtcttcc	7320

RAW SEQUENCE LISTING

DATE: 06/16/2005

PATENT APPLICATION: US/10/537,839

TIME: 10:18:53

Input Set : A:\pto.da.txt

Output Set: N:\CRF4\06162005\J537839.raw

3612	ttttgcataa	ctgcggtcaac	tagaacataa	atttccagga	gggcaggaat	ttcttttctt	7380
3614	ttttgttcac	tgtggaatct	caagcacctt	gcacaatttt	ttaacagcac	ccccctcagat	7440
3616	aggtagctgt	attcccatta	tacagatgag	gaaactggga	cacagtaagg	ttaaataaca	7500
3618	tgtccacgat	tgtgtagtca	gagccagact	tttctccaca	gtctaattggg	cttaaccaga	7560
3620	gtcctgtatt	gacccacttc	tatgcatccc	ttccagtgtt	atgttcaaga	cagaaggata	7620
3622	gttattattg	agagtagtta	gatctcagac	atgggtctctg	ctgtcgtggc	gttaacaatc	7680
3624	atttgggaaa	acaggatgca	tatcagatag	ccgctatata	aagaaggatc	taatgagtgc	7740
3626	tatgtaaaca	tgtataggcc	atcagagggg	aacacatttc	cttttccaaa	gaagaatgac	7800
3628	tacccatagt	tcttatgatt	tgtgccatat	tattttttaa	accctagaca	caactaattg	7860
3630	gaataaggat	aatttcctta	gtcaaaagct	ggctactcta	ggctaggcat	cagcccaata	7920
3632	tggggcctag	tatatgaacg	ctaagcctat	ttgactgttg	agatagtatc	ctcagttttc	7980
3634	ttattggcca	tgtatctgta	caataaatct	atcatctggg	agcctgagca	tgtctttagt	8040
3636	ccttggtgcc	agaaaaggtc	tctcatgcat	aatgcagttt	aaaagtccta	cagatgttca	8100
3638	aaggagtcat	aggttagagg	aagataaggc	tgagacactt	catggagaat	tgacacatga	8160
3640	gctgccactg	aaataagaat	ataccttaat	cagtgtttta	gagatcatat	cttcagatcg	8220
3642	ttttaattta	taaagtataa	gaactacatg	ttttcacagc	atgccaggag	caaaagatga	8280
3644	aaaaaagaac	tataagtgct	tgacttgagt	gttgattata	tttttgtgga	cttatttagac	8340
3646	attttatttt	atataaatgg	tgtttcaaaa	attaattcat	ttttatata	tgtcaggtta	8400
3648	tttgttataa	gtagaaaaca	ctatctgtag	ttttgactag	aaataatata	aaagtgcatt	8460
3650	tctgaacctg	tggttcaata	attgccaatg	atttataaaa	gtgttttcagg	tgtcattcag	8520
3652	tgtggtaatg	cagttccatt	tcactttttt	aaaattccat	aaggtaaaag	aaaaagagca	8580
3654	ataaaaaggaa	ccagaagaaa	gtaaaaaggg	aaaaaagaag	agaaagaata	atcaaaattt	8640
3656	gcaatttaga	gcctctgccc	ttttgacttt	cagtttgagt	tttattctgg	aaatgacttc	8700
3658	tgtgtcctct	gtcatgtctc	tggcagcaga	gaggggaagg	agggaagaaa	cctgcctttt	8760
3660	tatcctagtt	cactcattca	atgaatat	atggagacct	tactaggtag	ctgtaactgt	8820
3662	gctttttatc	atatgccctc	tgccctggatt	ttttttttct	ttttcctttt	atccgtggca	8880
3664	acttcctatt	tatccagtga	gctgtagctt	aaatattgcc	tactttttga	aatgctcact	8940
3666	tattctacaa	agttatactc	tccttctcct	acatctcata	gcattttacc	tatcctacct	9000
3668	tcggaatatc	tgtttgtctg	tcgcactctt	ccatcagact	gaccacttca	agtgtagaag	9060
3670	acttttactc	tttttctcat	caccctttaa	cactaagcat	tatacctaac	acataggagt	9120
3672	tgtcagcaa	atgtctgata	tggatgatgg	gtagatgggt	gaccaactgt	tgacaacttg	9180
3674	ttgaaaagta	taaaagatgg	aattttgcat	ctggctatca	tggagttaga	gactaacact	9240
3676	ccattaaga	acaactagaa	aactctagatt	aaattccata	agaatcgtat	ttgctggcat	9300
3678	cagagagctg	ctaaggcagt	ttgctgaggt	gagcccaaca	gtctgtgtat	tacttttctc	9360
3680	cttaggagag	ctggtaaaat	cttaaatagc	taaaagcaga	gcagagtttt	tggcaatctc	9420
3682	atagtgttga	ggaaagaaaa	aacatgagtc	ttagctcacc	aaagaggagg	tggctctagt	9480
3684	taatataccag	gctttcaact	ggcaatccct	acggatcaaa	agtctacaaa	gtctagaaca	9540
3686	cctcttcaca	tagactcagt	ccctgctgat	cagaatcctt	tctaaaggaa	gataacatca	9600
3688	tttagagtta	ctacaatttt	tcatacacag	tgtttggcat	ttgatagaaa	actaccagac	9660
3690	agaacaaaaa	aaaaaaacag	gcctaagggg	gtgtgagggg	gcagggtagg	agagttagaga	9720
3692	acagactaat	aactgacctc	gaaattagag	ttttcagaaa	tggacttcaa	aataactacg	9780
3694	ataagttaaa	gaatataaat	actaagattg	agaattttaa	aatataatca	aattgaaatt	9840
3696	ttaaaaatat	aatcaagttg	aaattctata	actgaaaaat	cactgacatt	ataaaactcaa	9900
3698	tagatggggg	ttaacagcat	gaaaaactga	agtaggctgg	gcacagtgc	tcacgcctgt	9960
3700	aatcccagca	ctttgggagg	ccaaggtagg	aggattgctt	gagaccaaga	gttcaagacc	10020
3702	agcctgggca	atatagtgc	acccctgtct	ctacaaaaaa	aaaaatcaaa	caaattagcc	10080
3704	atcctgtcta	ctcaggaggc	tgagggtggg	ggatcacctg	agcccaggag	ttcaaggctg	10140
3706	caatgagcta	tgaccatgcc	attgtacccc	agcctgggtg	acagagagag	atcttgtctt	10200
3708	aaaaaaaaaa	aaattggagt	tacccttacc	ccagttaagt	tacaacttaa	gagtgcatta	10260

RAW SEQUENCE LISTING

DATE: 06/16/2005

PATENT APPLICATION: US/10/537,839

TIME: 10:18:53

Input Set : A:\pto.da.txt

Output Set: N:\CRF4\06162005\J537839.raw

```

3710 ataaaccagg aagaatgaga ttatatattatg gagagtatta acagtattga aaagagcaaa 10320
3712 aggatataca ggacatggta aaaagtctaa catagatgta attttgggcc cagaaaggga 10380
3714 agagagagag aatggagcaa aagtagcatc tgaaatgata atggccaaga acttttcaaa 10440
3716 agtgaccaat gaaaataagc cacagattca gaaagtgcac tgaattctta gcaggattta 10500
3718 aaaacactaa aacaacagca tgccactgta aaactgctaa aaaccgaaga caaagaaaat 10560
3720 cttgaaagca gcaagaaggg ggaaaagcac attactgtcc aaaaagcaac agtgagactg 10620
3722 acagttaact tctcagtaga aatgatggaa gccaagcaa caaaactata gtgattcatt 10680
3724 gcttaattaa caacagggat acattttgag aaatgcaatt ttccattagg caattttgtc 10740
3726 attgtgcaaa catcgtagag tgtacttaca caaacctaga tggatgcct actacacacc 10800
3728 taggccacgt gctggagcct attgctctgc agtaacttgc ggaacctgta tggcatgttg 10860
3730 ctatactgaa tactgtaggc aattgtagca caacataagt atttgtgttt ctaaactag 10920
3732 caaaagcaca gtaaaaataa tggattata acctcatggg aacctgccca tatatagtct 10980
3734 atcattgacc aagatgtcat tatatgggtgc atgactatgt acatcttaaa tgaaagataa 11040
3736 gctgccattc tacaattctg tatttgcaaa gatagccatc aaacatgaag acagtataaa 11100
3738 gacctttttt ctttttcttt tttttttttt gagacggagt ctactctgt tgtcaggctg 11160
3740 gagtgcagtg gtgcaatctt ggctcactgc aacctccgcc tctgggttc aagtgtattc 11220
3742 cctgcctcag gctccccaat agctgggatt acaggcaccc gccaccacac ccagctaatt 11280
3744 ttttgatatt tttagtagag acaggttttc accatgttgg ccaggctggg ctcaaatcc 11340
3746 tgacctcagg tgatccaccc acctcggtgc tgggattaca ggcgtgagcc actgtgcctg 11400
3748 gtggagacat ttatagagta tcaagaactg agggagtttc cagtagacct gcacttaaaag 11460
3750 aaacaccaaa gagatttctt taggcaaatg gaaaattatc ccagtcagta atacagaaat 11520
3752 gcgagaagga atgaagagca acagagaggg taaatatgta tttaaatcta aaagaacacc 11580
3754 ggccaggcaa aacagtaata aaacaataag ataaaggaaa ggaagccaat gaaattaaaa 11640
3756 tattgtatgt ttctaggact gcctaggaag tggtaaaagt actgatttat ttgaggattt 11700
3758 aataaatcaa ggtcacatat tataattttc agggtagcta ctacagaaaa aaaattaaag 11760
3760 aatatataat taacaagcta aaagaaaaaag gatcaaatat aaaatgttta atacaaaaaa 11820
3762 gacaataaat gagaaaaaag gaacataaaa taagtaggac aaatgaaaaa caaatattaa 11880
3764 gatggtagat ataaactcca attcatcgta actacattaa gtattactgg aaatacttca 11940
3766 attaaaagac aaaggtgatc aagctggatt taaaaaaaaa ctacttgctg cttgcaagaa 12000
3768 ttataactac ttagaaaaag tgtttggcag tatctgtgaa agctgggcac atgcatactc 12060
3770 gatggcccca gcaatctact tctacaaagg tactcacaag aagtatgcat agaattgta 12120
3772 aagcagcatt acaatggcca caaactagaa actaccctaa tattcatcaa cagaagaatg 12180
3774 aataagttct tagataagtc ttaataaaaa tgatttttaa agtaacattt atcaaaagaa 12240
3776 gccagacaca aaagagtaca caatgtatga ttccataact ataaagttca aaaacaggca 12300
3778 aaactaatcg atggtggttag aagttagggt agagatgacc tttggaaggg atggtgagca 12360
3780 aaaggggtta atgttctgtt cctcattcct ctgataatta tatgggtatg tttactttat 12420
3782 aaaaaattca ccaaaaaata aaagaaaaaa gaaaaaaatt caccaacctg tatatttatg 12480
3784 acttgtgcat tgcattgatg ttttatttga ataaaaagtt tagtttttaa aaagtgtatc 12540
3786 aggaaaggta ttagaattgg cagcaagggtc aattcagtta tatttttagta tgtaagaaac 12600
3788 ttggccgggc gcagtggctc atgctgtgaa tcccagcact ttgggaggcc aaggtggccc 12660
3790 aatcaccaga ggtcaggagt tcaagaccag cctaaccaac atggtgaaac cctgtctcta 12720
3792 ctaaaaatac aaaaattagc tgggtgtggt ggcgggagcc tgtaatccca gctattgggg 12780
3794 aggctgaggc aggagaatca cttgaaccca ggaggcagag gttgcattga gctgagatcg 12840
3796 cgccactgcc ctccagcctg ggcgacagag tgagactctg tctcaaaaaa aaaaaaaaaa 12900
3798 aaagaaaaaag acaacatgct tcaagaagga aaggttgaac ccacagggaa agggagtgtt 12960
3800 tgaagatgct gaagagatga taaattaagc tacttaagga caaataagag gattcattca 13020
3802 ttcagctgaa tattttaagt ccctattata atccaagagc tatctgaggt gttaggaatc 13080
3804 caaaaattaa taaggcttag tccctatttt tagagtgtgc actgtccagg agcaaaagat 13140
3806 gccaatgatg atgtctgtaa aaactacata tttttaatac tttccttgta cgagacactg 13200

```

RAW SEQUENCE LISTING

DATE: 06/16/2005

PATENT APPLICATION: US/10/537,839

TIME: 10:18:53

Input Set : A:\pto.da.txt

Output Set: N:\CRF4\06162005\J537839.raw

```

3808 tgctgtgcag gtttgcagta tcttacctga tatttacaac aatccaatga ggtagatggt 13260
3810 atctcccttt tcctgatgaa acacaggaaa taatataagt tttccaaggt ctcaccacca 13320
3812 agataaaaaac ataagtctgt ctgacgttaa agccgtgttc ctgctgtgtac tttacactgc 13380
3814 cattggatgg tgtgtggtta catgcaacag tcacaatcaa ttctagtggg gatgtcttgg 13440
3816 agaaggtgg atagatggcc tgagcctcaa aggatgagca gacagagaat aatgtttgat 13500
3818 ggcctggaag tggatttgaa ggaagaagag tcttttctct gaataaaggc cagattttca 13560
3820 aagaaggtgg cagaaatgta taatgaacct gagacgactg agtgctgttt ctcagggaaa 13620
3822 ggatctacct gctccatata cagactttca accaagtgtc ttgttttcag accttcctcc 13680
3824 tacaaagctg tctggcgtct ccaattcctg actctgttct ggacttcttt gctttgtaaa 13740
3826 tgttggtatc atgtaatttt atagccagat tgttttaaatg tttcataatg aacattttcc 13800
3828 caaagcaaac tgcttgttgc aaaacaaccg tatctttaag ccagcattgt gggagagttc 13860
3830 tagattcctg ccagagttaa acccaaggta gtcatatgtg taattcaagt gctcataaaa 13920
3832 cagctggaag gaaaaaaaaat ttggatataa aataaattat aggtggggca cagtggctct 13980
3834 cacttgtaat ccagcactt cggaagccca aggtgggaga attgctgagc ccaggagttc 14040
3836 cagagcagcc tgggcaacat agcaagacct tgtctctaca aaaaaattaa aaaattagcc 14100
3838 ggggtgagtg ttgtgtacct gtaatcccag ctactcagga ggcggaggca caagaatcac 14160
3840 ttgagcctgg gaggcggagg ttgcagtga ccaaggtcat gccactgcac tctagcctgg 14220
3842 gtgacagagt aagactctgt ctcaaaaaaa aaaaaaaaaa aaagtctgta cggatacagg 14280
3844 gagcacactg ctctctttta aaggcaagac cgctatgttg aacattccac ttctgctaaa 14340
3846 ccctaattat ccagaagtta taagactgag aagcaatcta gcttggtggc catgtgctct 14400
3848 gtgctatata agaagctgag gtcagtactg gggacaacca atgctctctg ccatattctg 14460
3850 agcttagtaa acttgagagt gttgaattaa tttagattaa tgtagctgat tggtaaattc 14520
3852 tgatctttgt ggtagggtct gcttctactt gtttatatta aaaaggtaat gcagaactta 14580
3854 ggcctggcgt ggtggctcac acctgttatt ccagcagttt aagagaccaa ggcgggtgga 14640
3856 tcgcttgtgc ttaggagttt gagaccagcc tgggcaacgt ggcgaaacct tgtctctaca 14700
3858 aaaaatacaa aagttagccg ggcattggtg cacataacctg cagtcccagc tacacggaac 14760
3860 gctgaggtag gaggatccct tgagcccagg aggcagaggc tgcagtgagc tgagatcgcg 14820
3862 ccactgcact ccagccagga cgacagtaca agatcttgtc tcaaaaaaaaa aaaaaaaaaa 14880
3864 aaaaaaaaaa cagaacttaa aacataaaat tgctacatat ttatatagat gaaatcacta 14940
3866 agatttttac ctatatacaa acctaacaga atatggacgc ttactgcttt gtacttcttt 15000
3868 attcactgga attaagtaaa attctctttc cattttggcc agtgaaatca actcttgtag 15060
3870 ggttactttt gcttttaata ctaaccaatt aaattctaga gcctaggctt aaaaatgcaa 15120
3872 atctttataa taaaaagaga ctaagataga ggtgaaggag atgtcccttt agagcagtag 15180
3874 aggaagagtt atggttctat ttcatgtaac tacctcaaat aatctacttt gatgaggtgt 15240
3876 taaattaaaga acattcataa gaacatcaat cttgttttcc tgtgcaatat gaaaacttgt 15300
3878 gtgaatattt ataggctagc aacttgtttt tcttttctct gttcttgtag gtataatttg 15360
3880 aacaacaggg ccttgtaaaa gtcttaagac ttttgaaatt gttaaatact gcaaagataa 15420
3882 ccttcaaaga gaagtgtgta atcctgattg gctgtcttct agatagtttg ttgccttggt 15480
3884 gataacacta atttacatgt ctgaattcct aaacaaccta aaaacttgta tctttgctct 15540
3886 gtaaagtcag aagagaatca ttggcacatt tctcttttcc cgtatgaata atggagagaa 15600
3888 acaaattcct gttacactgg ttgatttctt attttaataa agatttaaca aaggaaattg 15660
3890 cctttgtgtg tgtgtgaaaa tttagtatct aatatcctta tctttgggaa ttcattgtaat 15720
3892 tctttttctc aagttattta acagtgttct tcttttttct acatagactg tccttcatct 15780
3894 acttgatttc agttccaaga cagttgttac atttttctcc aagaagccat caaagtagaa 15840
3896 agcatagagg atgtcagaaa tcagtgtact gaccatggta aaaggcttat tcttttctgt 15900
3898 ttgttttttc acaaattagt gaacagtgtt cattaatctt tttaaaaatt gattttgtca 15960
3900 catctgactt ttaactgggt cctgagattt aatgtacaac ttttatttga caacacacaa 16020
3902 gctacaggca gtggaattgg gtatatattt aatcctggag ttggaagaca gttgttgtag 16080
3904 aatattgtcc aaagcagggt ctatttaaca tgcatatcct gtgccaggca ctgtgcttaa 16140

```


RAW SEQUENCE LISTING

DATE: 06/16/2005

PATENT APPLICATION: US/10/537,839

TIME: 10:18:53

Input Set : A:\pto.da.txt

Output Set: N:\CRF4\06162005\J537839.raw

```

3906 gcacctcata tactttacct ggctttatca taacaaacct atcaagtagt gtattattat 16200
3908 cattttattg agagatgaaa ttaacttcag ttatttggtc aagcttacac aggaaataat 16260
3910 tgacaaagcc aggatttttaa cccagatctg ttggatttta ggcttagagt tcttaatcac 16320
3912 ttagttattc tgcttgaaa gtgctgaagt cagattacat aggaccatga agtaagactg 16380
3914 tagtaaagaa gagtacatta aggaaaaatt ataaaaaggc tatttgctag accatacact 16440
3916 cagtgttctc taggaaatag atttataaca tcacattgta aaatatgtga agtgtctttt 16500
3918 tttttttttt tgagacaggg tcttgctgtg tccccagggc ttgagtgcag tggcatgatc 16560
3920 atagctcact acagccttga actcctgggt tcaagtgatc ctcccatgtc agccccctga 16620
3922 atagacagga ctacaggcgt gcgctagcta ttttatctgt ttgtttgtag agacagggtt 16680
3924 tcaactatgtt gccacaggctg gtctgaaact cttggcctca agtgatcctc tcaccttggc 16740
3926 cttccaagggt gctgggatta cagggtgtgag ccactgcac cagccaaaaa aatgtctttt 16800
3928 tttttttttt tttttttttt tgtgagatgg agtctcgctc tgtcgcttag gctggagtgc 16860
3930 agtggcgtga tctcggtcga ctgcaagctg cgctcccggt gttcacgcca ttctcctgcc 16920
3932 tcagcctccc gagtagctgg gattaccagc gccaccaat agggccgggt aattttttgt 16980
3934 gtttttagta gagacgggggt ttcactgttg gccaggatgg tctcgtctcc tgacctgtg 17040
3936 atcaggatca agtgattctc ctgcctcagc ctcccgagta gctgagatta caggggtgca 17100
3938 tcaccacacc tggctaattt tttgtatttt tagtagaaac aaggtttcac caggttaacc 17160
3940 aggctggtgc cgaactcctg aggtcaggca atccacctgc ctacgcctcc caaagtgtg 17220
3942 ggattacagg tgtgagccac catgccagc cttaaagggt tttttattac tgttatattc 17280
3944 ttcaacaata acatttgga gaatgtatca aattgtacta gggatacctt aatcaaaatc 17340
3946 atatacattt attatagaag gaataaatgt aaacaccaa gttattaatc ttattaaagc 17400
3948 gccacatagt acttaataca tataatgtgt ttccttttga aaaagtctta catgaacatt 17460
3950 ggctctgtga aaacaagacg aaatttccaa catgccataa tggttttatt tcaaggcagt 17520
3952 tgaaataaaa taatagcaat tttgctgggtc ttagaatatt tttaaaacaa gttttcccct 17580
3954 gcaactattt tctttccttt ctcccttttt ctctctctc tttctttct tctctctct 17640
3956 tttcatttgt tctttctttc tttccctttt ttttttttaa tggagtctca gtctgttgcc 17700
3958 caggctggag tgcagtgggtg tgatctcagc tcattgcaac ctctacctcc tgggttcaag 17760
3960 caattctcct gcctcagcct cctgagtagc tgggattaca ggtgggtgcc accagacca 17820
3962 actaatttta ttttatttta ttttttttg gtaggacag gatttcgtca tgttgccag 17880
3964 gctggtctca aactcctgac ctgagtgat ccaccgcct cagcctcca aagtgtggg 17940
3966 attacaggca tgagccacca cgcccagccc ctacaactat tttccatccc ttaaaaaaaa 18000
3968 ttatgtaaag tatactgaga cataaacata atttcaatga cataaatcat attagaggct 18060
3970 gagagccaag acatgtccct gtaaccttat tagctgtat gaactgtaag atcaagttt 18120
3972 attgtccagc tctaataat atagaaagtt aagcaactat ttattatttt tatgtacct 18180
3974 gtgattttca ctgattctgg aatatgctga ctttttttct ctttaaaata atttcaggag 18240
3976 cggacatgat aagcatacat aatgaagaag aaaatgcttt tatactggat actttgaaaa 18300
3978 agcaatggaa aggccagat gatatctac taggcatgtt ttatgacaca gatggtaagt 18360
3980 gatatttacc tcgtgggacg tgactttgtt gttctttttt taatgtagca aaactgatgg 18420
3982 cttttcaatt ctctggttca agttgatgat tctgtgggcc tccagggtgtt aaattttcag 18480
3984 tgtgcacctg tgatcatacc acagcttgta tctgcatagc tcaatgagtt acacagatga 18540
3986 aagccacagt tgattcttgt ctggattaaa atgtggctct aaggctcagt atttttgtaa 18600
3988 tatagcatga tcataaaggt aagtattagt gtctgcaact aataggctaa ggatagacta 18660
3990 aattatcacg gttctattat ataaacatat ttatcattac tgtagacaaa gtacatatgt 18720
3992 acaaatataa aagtacatat gtaaacattt tcaaatgaaa tgaaattact aaggttacta 18780
3994 ttaatattta actatttttc ttgacttttt tcccatgaga atattatata tgtatatatt 18840
3996 tttgcgaaaa ttggatcatc ttcagaaacc tcttaaatcg atagcttttg atgatttggc 18900
3998 tgtacacagg atatatcct ccttctaatt ttaatcctac aatcagaagt ttagaccaga 18960
4000 cataccttag taactttcca cctttaatcc tacacccttt ttggcttgaa ctctttttaa 19020
4002 aactgtcata atgttgaaaa tattccttaa ttgacagatg cgagtttcaa gtggtttgat 19080

```

RAW SEQUENCE LISTING

DATE: 06/16/2005

PATENT APPLICATION: US/10/537,839

TIME: 10:18:53

Input Set : A:\pto.da.txt

Output Set: N:\CRF4\06162005\J537839.raw

```

4004 aattcaaata tgacatttga taagtggaca gaccaagatg atgatgagga tttagttgac 19140
4006 acctgtgctt ttctgcacat caagacaggt gaatggaaaa aaggaaattg tgaagtttct 19200
4008 tctgtggaag gaacactatg caaaacagct agtaagtatg accgaaggtg tttttccatt 19260
4010 ctagaagggg cagagaaagt aggactgggt ttaaaataat tttgagataa gtgtgcctca 19320
4012 ataaatagaa taaggctagg cacagtggct cagcctgca atcccagcat tatggtaaac 19380
4014 tgaggcactg gattgcttga gcgcaggagt tgaagaccag cttgagcaac atggcgaaaa 19440
4016 ctcatctcta caaaaaatac aaaaatcagc tgggcatggg ggcgtgcacc tgcgggccga 19500
4018 aatacatggg agcctgaggt gggaggatca attgagcctg ggaggttgag gctgcagtaa 19560
4020 gcctgggcaa cagagcaaca ctctgtctca aaaagaaaaa aaaaaataga gggaataaga 19620
4022 cttcagaata tattaatagg atggtttgct cttaagtctc ttggaactca aattgtaatt 19680
4024 ctcttacatt taggaggtaa ggccagatca catgaaatag gcatactttt attctgtctg 19740
4026 cttagtgttt ccaagagggtc aaaaatttct tgttcagagg aattattata atctctttgc 19800
4028 atgtgatttg agtgagcaga agtggatgaag agtaatcatg tataattcca gaattctcgt 19860
4030 gttactttac aaggaattag attctccata agaacatcct ttgtttaggc aaacaaaaac 19920
4032 tacatcatag tttataattt atttggaaat aaaatgtttt cttctgaccc gtcagaaggt 19980
4034 tttttttttt tttttttttt tttttgcat gcagtctctc tctgtcgccc aggctggagt 20040
4036 gcggtggcgc gatcttggct cactgcaacc tctgcctcct ggcttcaagc gattctcctg 20100
4038 cctcagcctc ccaagtagct gggactacag gcacccgcca ccatgcccg gtaatttttg 20160
4040 tatttttttag tagagatggg gtttcaccat attggccagg ctggtctcga actcctgacc 20220
4042 ttgtgatctg cccacctcag cctcccaaag tgtaggatt acagacgtga gccactgtgc 20280
4044 ccggcccaga aggtttttta atgaacagaa gttatcctgg cccacaacag tattttgatg 20340
4046 ttatttgtaa aaacactaca cagtttgtaa ttctaagttt tagaaagtaa ctgttttctc 20400
4048 attaaagaaa attaaatttt caaatgtgg gctgggtaca gtggctcatg cttgtaatcc 20460
4050 cagcactttt tgaggctgag gcagcctggg tcaacatagc aagaccacca tctctacaaa 20520
4052 aaaagttttt agttttttta atgtttcaaa atatgaattt aggggtgctta aaacatgata 20580
4054 taaacaacca tttccccatt ttgcacctc agtattttcc cttctactt caactgtaaa 20640
4056 caaaaactcc acatcctgct ttatttcctt tctttacata tggaagtatg tacattttctt 20700
4058 tacttgctac agcaggatcc ttgactactg ttagttttac agtgattatc aaaatgttcg 20760
4060 tcatagtttt atggtagcag tattcaactt caaatatttg ttttttaaaa aattggttct 20820
4062 tttcaggttc tgcacctcag ggtgccatta cataaacaaa gtttttaatt aaactataac 20880
4064 ttcaaaacat cagaaatagt gagtacatcc atactaagg agttagggtc acagttgttt 20940
4066 aattttatga catttgtttt ctgactctc caaccagaat cctctttttt cctttacctc 21000
4068 attattgtct ttctcctcaag atcccgatatt cttttccacc aaccaagcta atgcatgttg 21060
4070 ttagccctct acatctttct ttaaaaaacta agttcaaaat agacaacaga gacaactaat 21120
4072 gaggcaaaga aatatggatt ttaggctatg aatatattga tattaagcta ctaataaaaag 21180
4074 ggtttatatt taatgattgt gaacatgttt aaagtcaatc ctataataaa gcataattaa 21240
4076 attctaattt ttattttctt ttgtatttta gtcccataca aaaggaaata tttatcaggt 21300
4078 aagtaatgat ttggtcttta aatttttccc acaattaaaa atatatcaaa attctggcat 21360
4080 attaaaatac attacagatc cttttttaaa attatgtaat ataaagtaga acaattttta 21420
4082 taagaatgta gaaaggctc ttagtaataa gactcaacat tttaaatata ttctacaata 21480
4084 tgtagttttg tctggcttct tttactcggg aatatttttt tagattcatc tgtgttgtgc 21540
4086 acattcactg aattttttcc ctaagtgtca taatacttta taaatatatc atatatgtc 21600
4088 cattctcttg tttatggata tttggatcac ttctagtttt aaactaattt gaatagaact 21660
4090 gcctatgaac attctcccac atcttctttt ggacctatgt tctcattttc tttgagtata 21720
4092 ttctagaaag tagaaagctg ggtcataggg caagtatata tatttagatt tattagaaac 21780
4094 caccaaataa tttttcaaaa tgcctgaatc atgttactac tggcagtgcg tccaagttcc 21840
4096 atttgctcca tgctcatccc atgatggat tgtcaattta tttttagcca ttcagatcag 21900
4098 gtgtgtagt atcttcttgt ggctttaatt ttcatttacc tgaataatgat gttgagcacc 21960
4100 tttcagatga ttatttattt gtatatcttt tgtgaaaagg cttttaccca tttgcggagt 22020

```

RAW SEQUENCE LISTING

DATE: 06/16/2005

PATENT APPLICATION: US/10/537,839

TIME: 10:18:53

Input Set : A:\pto.da.txt

Output Set : N:\CRF4\06162005\J537839.raw

4102	gcagtgggtgt	gagcttgact	caccgcagtc	ttgacctcct	gggctcaagc	gatacttcca	22080
4104	cctcagcctc	ccaagtagct	gggactacag	gtgtgggccg	ccatgcccag	ctaacttttt	22140
4106	ttgtacagat	ggagtttcac	catgttacc	aggctagtct	caaactcctg	ggttcaaagg	22200
4108	atccaccgc	ctcagcctcc	caaagtgtctg	agattacagg	cgttgggccg	ccatgcccag	22260
4110	ccaccatata	tttttttgag	ttgcctatat	ttttggtagg	aattttttaa	acaaattttg	22320
4112	tttcttttaa	tttgatatg	ggccgggcta	aataatacaa	aacttagccg	ggcacgggtg	22380
4114	cgggcgcctg	taatcccggc	tacttgggag	gttgaggcag	ggagaattgc	atgaatttgg	22440
4116	gaggcggagg	ttgcagttag	ccgagatcac	gccactgccc	tccagcctcg	gcgacagagt	22500
4118	gactccatct	cacaaaaaaaa	aaaaaaaaaaa	aaaaaaaaaatt	ggatgtgagt	cctttgccag	22560
4120	ttttctattt	ggggggttact	acgatagaac	tatgacagag	gaggagaaaa	gaagtgttgg	22620
4122	gtttgtgtgt	atacaggaat	tacatcctca	ttaatctata	ggaagaagac	aataataaac	22680
4124	aagcattagt	gtggatatgc	agcaattgga	actcttgttg	taggaatgta	aaatggtgca	22740
4126	gcctctgtga	aaaacagtgt	ggtggttctt	caaaaaaaat	tattaaaaga	attaccgtat	22800
4128	gatccagcaa	ttctgagtat	gtatcccaaa	taactgaaag	caaggactct	ttaatatccg	22860
4130	tacaccatc	tgtttgatat	ttgtgtatct	atgttcatag	catcatttgc	catagccaaa	22920
4132	aggtggaagc	aacccaagtgt	tccactgatg	aggggataaa	caaaatgtaa	tctgcacata	22980
4134	caactgagta	tcatttagcc	ttaaaagaga	agaaaattct	gacacgtgct	acaacatgca	23040
4136	taaacctgaa	ggacattagg	ctaaacaaaa	taagccaggc	acaggccggg	cgcagtggct	23100
4138	cacgcctgta	atcccagcac	tttgggaggc	tgagaccggt	ggatcacctg	aggtcaggag	23160
4140	tttgagacca	gcctggccaa	catggcgaaa	tcccgaactct	actttaaaaa	aaaaaaaaaa	23220
4142	aaagtgtgaa	cccggaggca	gaggctgcag	tgagccggga	tactccact	gcactccagc	23280
4144	ctgggcgaga	cagagcaagc	ctccatctaa	aacaaaacaa	aacaaaacca	ccacaaaaaa	23340
4146	aaaagaaaaa	taagccagtc	ataaaaggcc	aaattctgta	taattcttac	ctatagtatg	23400
4148	aggtacctaa	agtagtcaac	ctcaccaaga	aactctttgc	caagggttag	gtcaggaaga	23460
4150	aatgggagtt	taataggtac	agtttccatt	ttacaaaatg	agttgttctg	tgaatggatg	23520
4152	gtggtgatgt	agcacacga	agtgaatgta	cttaatgcta	ctgcacacct	aagatggtat	23580
4154	ttgttacatg	tatttcttta	aattacattt	ttaaaaaatc	aagcagcgga	agcatgttat	23640
4156	ttagacatgg	agacagataa	atagctgaag	caacagtagt	agttaacttt	aaggaatgga	23700
4158	tgttcagggtg	agtagtggag	caggagcaca	gtattttcac	tacgtatctt	ctagaactat	23760
4160	gacttttaag	ctacgtaaat	gtattacttt	ggaaaaaata	aagatacaca	taagttggaa	23820
4162	catttagaaa	aaaatagggtc	tgtggcttca	aaaacgaata	gttgaaagat	ctggcaacat	23880
4164	atggtcttca	gactacaaga	aaagtaatct	ctgaattcat	tacatgtatg	catgtatata	23940
4166	tgtgcattgta	aatctgtatt	aaatatgtgt	atgtaattta	gtgagtaaac	actatgtgtc	24000
4168	aggctttctc	ctaaagtttag	acattgaaaga	cagagcaatg	aacaaaacaa	aagcctctgc	24060
4170	tctcaagcat	acattctagt	gggaagggtta	aaacaaaact	atgtgagatg	gtgacacatc	24120
4172	ctatagggaa	aacaggcaga	taaggatgaa	ttccagtgc	agaaggagg	tggtgcactt	24180
4174	tattttttatt	tttagtacag	tggccaggga	aggcctcatt	taataaggcc	atgattttgc	24240
4176	ataatgaaga	cctaaagtca	aagtgaagc	ctgtcatgta	gatagggtatt	aggcttagtc	24300
4178	tgactttaag	gagtaaaaca	gtagagaaca	tggagtgtga	gcagcaagga	aacaacccaa	24360
4180	cagttaagtgt	tagctgccat	cttggcaaac	aggaggttcc	ccttcatacc	aagggttaagc	24420
4182	tggagactc	ccttgggaag	aatactttca	acagaattaa	ggtgtccata	gtcggatgca	24480
4184	cctagtgtgg	caagcacaca	ggaaagggtca	agttagtcca	agctgggttc	agcaagggtt	24540
4186	actggagagg	atgcaggagt	taaatcttca	aggataagta	gacatcaggc	aggagacaga	24600
4188	ggacagggtta	tctgagggtga	caaatacagga	ccaagggtgaa	gggttgaatt	tttgctgtca	24660
4190	cttactaaat	ggacttgggc	aagtcattta	aaccctgtgc	ctcagaatta	aatgcacagt	24720
4192	tggcactctc	acctgaggct	acagcctaac	aaaatgtttc	atatagtttt	tgagggtgat	24780
4194	tatgtatagt	tgggcctca	gatgatcagt	gttagaacta	gagcgtaag	gtagcagtca	24840
4196	gatagataaa	taggaaacag	aagaaaaatg	tgtagtcttc	acaatttata	gagaggaagt	24900
4198	ctataaattt	ccagattgggt	tgactggaca	gtggctattt	atttgcagga	attcagggtta	24960

RAW SEQUENCE LISTING

DATE: 06/16/2005

PATENT APPLICATION: US/10/537,839

TIME: 10:18:53

Input Set : A:\pto.da.txt

Output Set: N:\CRF4\06162005\J537839.raw

4200	gaagaaatttt	ggaagtaggg	ctacacacac	atattttatct	atggattttac	ataaaaagact	25020
4202	tgaatggttg	agatcaacca	tggaaagctt	tgagtccaca	aagatgacta	ggaagcagtc	25080
4204	gtctgaaaaa	tagagcagtc	agggaagcca	agtgagtagg	agataacttc	aaggctggac	25140
4206	ggctaacaat	ctagttgccc	caggatgaac	taaaacatcc	acgtgtttta	gcatgtagtc	25200
4208	ataaagagat	cattggtgac	ctctgccaca	gaaattttctg	aagaaatggt	gagaaaatgg	25260
4210	attaaatggg	cttaagaaat	gaaaaagtga	gcttgtttca	gtgtttgctg	tttcctcaag	25320
4212	taaggaacat	tgtaggcta	aaaagtattt	ttcctaaatt	ttgtttcttt	aaaaaaaaca	25380
4214	ggatttcatg	gtaaatagct	attatatgct	gtcaagcaag	caatggacct	ttcctttaat	25440
4216	taatgaggta	gataatacat	ttcctaattg	aaaactatcc	taacctccag	atataaacta	25500
4218	cacattgttt	taatacactg	cttatcagtt	gccttgacaa	ttgactttgt	cacacatttt	25560
4220	agtagtatgc	agctagctaa	ctaaaacccc	tggaggcaac	tttggctaaa	ggtcacttgc	25620
4222	agaatgtgaa	aagcagcata	tatacttact	gtgtctcgcc	catcttggac	actgtccagt	25680
4224	tcttaggata	cccggctctt	taaagctatt	atgattgagt	ctgtaaatat	ttctcaatta	25740
4226	ctatgatctt	tcagactttt	ctatattact	atcatgtaat	tcctatttaa	agtagatgct	25800
4228	accgattatg	aagccattat	tgtacaatca	ttagtacact	gaaataaagt	gtgttcacac	25860
4230	tggtaaagtt	gaggttctac	actgaaaatg	gactatgtta	attctaataa	aactaactac	25920
4232	ggggctgggc	acggtggccc	acacctgtaa	tcccagcact	ctgggaggcc	gaggggggca	25980
4234	gatcacttga	agccaggggt	ttcggaccac	cctgggcaac	atggcaaaac	tgtctctact	26040
4236	aaaaatacaa	aaattagctg	gacatcatgg	cgtgcgcctg	tcattctcagc	taccaggct	26100
4238	gacacatgag	aatccctggc	accagaagg	cggagggtgc	cgtagccaaa	aactatggaa	26160
4240	gaaccccat	tgaactcagt	ttacggaatt	cttggctttt	tttcatttta	atgtctttaa	26220
4242	taataccacc	accaaataca	ccctcacacc	ttaccaaatc	tttactacca	aattttattt	26280
4244	cagaattaaa	aagatagttc	acttggggcc	atttctctac	tcctcccaaa	aaatcctgtc	26340
4246	aatatttgaa	aagtatcaat	ggctctccct	cactttaaca	aataatttgg	ccaaatttct	26400
4248	ctcactaatc	ttaaattctt	ccaggctcca	ttttaacaag	caccagttga	aataatgggt	26460
4250	attatgaata	tatttaataa	taaaaaatct	gtcaaaaata	ttctgaaaag	ttttcacatt	26520
4252	ctttagagtc	gattactata	cataatacaa	gtacctgccc	aaaagtatgt	ttgttctcct	26580
4254	aaaccagggt	attttcctca	atttattaaa	ctggattctt	atagaaaagt	tacaagggtt	26640
4256	tgaataggca	agaactgcaa	agttgtgcat	acttacagaa	atttagggaa	acacacaaaag	26700
4258	aatgaatgaa	tgcaaaagaca	cacaaaacca	ggtactttac	tgcaggctct	ggtgtttttt	26760
4260	tcagttaaac	aaatcttaaa	tccccaaagc	caggatgaacc	attaaacctc	aataatgtaa	26820
4262	caattatct	aaatactaga	attcctaaag	ggaacagtag	gtctgaattt	gtagtcttag	26880
4264	atcagaaggt	aaagcgaagg	aagacaaact	ggagcatggt	atatacttgc	gtgatttcca	26940
4266	ctatgggggtc	ttcagtagag	tggagaagtg	cacaacttcc	tagaaaattt	gagtactatt	27000
4268	cttcaggcta	agaaatataa	atcttggttag	taacaaatgc	gaaatttttg	gttttctcat	27060
4270	cagtgtggga	aattctcaac	acagagaaat	gtttacacaa	aactacagtt	gtgtcatca	27120
4272	aaatatactt	gcaacttggt	taccctaatt	tcccaaatac	tcttttgtct	tttcttttct	27180
4274	agataaccac	attttaatat	cagcattggt	gattgctagc	acggtaattt	tgacagtttt	27240
4276	gggagcaatc	atttggttcc	tgtacaaaaa	acattctgat	tctcgtttca	ccacagtttt	27300
4278	ttcaaccgca	ccccaatcac	cttataatga	agactgtgtt	ttggtagttg	gagaagaaaa	27360
4280	tgaatatcct	gttcaatttg	actaagtttt	tggtaatctt	gcactaagac	atcaacaaaa	27420
4282	tgccctggca	gagataactt	gggaaagatt	ttaatataaa	acttgacatt	ggatattaga	27480
4284	gctttaatgg	tattccttat	tccagtaaca	tttttatgta	ctcatctgct	gtgaaaagtc	27540
4286	tttaggttca	ttaaaaaaac	aggttttaga	aatgatctta	gatctaatat	agtgatttta	27600
4288	agcatcccg	caaaggcaga	atctgtcact	tgaatgaagg	aaagcttaaa	gccccagcag	27660
4290	ataaaaaata	aagcccagcc	tatttgtctt	gcctgctgta	tcttccctat	ttagttgacc	27720
4292	cactttagtt	tatatgttta	ttagtaaaaca	tgaaatgggg	aataagtgat	tttaagtaca	27780
4294	tcccatacat	ttaaatatct	ttgataattg	ttattttttt	ggcagataat	tcctctagaa	27840
4296	tgtgtatctt	tttatgattt	agatgaagaa	aattttacaa	cttttaacac	cccacaccaa	27900

RAW SEQUENCE LISTING

DATE: 06/16/2005

PATENT APPLICATION: US/10/537,839

TIME: 10:18:53

Input Set : A:\pto.da.txt

Output Set: N:\CRF4\06162005\J537839.raw

```

4298 ttttagtttc attactttta cacacaccat tttatcacia atgactcaag ttttaatgaa 27960
4300 tgtttataaa ttatttgaaa caaaatatga tcgctgtgtc caggatggca tagagaaaagc 28020
4302 tggcaattag gttaacactt acatattata gtgccccttt aaggatttct ctcttgccac 28080
4304 catacctttt gtactttccc ctatacaaga tgtatctcat tctcctcaag catttataaa 28140
4306 tttttccttc aatgacatga aaactgtgca agcaaaaacc gaagaaaaac acttaagtac 28200
4308 aactgtagtg acagtgatca aagttttcag tgcatttatt gtacatttta agaaaaaggt 28260
4310 gaaaatcatt tggggagtaa aaaaatgaaa aagctgaaac gagtaatttt cctcaccatc 28320
4312 aataaaccaa aaacaggaaa gataaagaat gtataaattt cacgtaaatt agtcacgtat 28380
4314 cacttatcaa tggggatagc ttctaagaaa tgcatagtta gggaaatcttg tgtgaaaatc 28440
4316 agcttgtatt tacacaaaacc cagatggtag agcctatttt gtcccaaacc tacacagcat 28500
4318 gttactgtgc tgaatactgc agacaattgt aacacaatat ttgtgtatct aaatatagaa 28560
4320 aaggtagagt aaaaatatgg tctactaagg aaacactgtt ctatatgtgg tccattactg 28620
4322 actgaagtat actgtctaga agtctgaggc tcaaagaaaa gtaatccctc ttctgaatcc 28680
4324 acaccccatc aattatctta ctttcttctg gggagataga tagataact atctcactag 28740
4326 cttgactaat ggcaacaaag ttccagcttg tgtagtctct ttttattgac cacatgaatc 28800
4328 gaaaacactc atcacaaatg atggcactat cattaatgag acatgagtaa ctaaaaagtg 28860
4330 atagaaaact attaacagtg cggctacatg gtactgaaaa tgcaggcatt acaccagctg 28920
4332 ttacacaagc acaagcatgc tctgtaagag cttttacatt ctgagatttt gtatagtgat 28980
4334 tgagatgtct attttattat tgatagacta ttactaatgt caatattgaa cactaccctg 29040
4336 gaattcctgc ctgggttttc tacccaaatt gtaccactcc ttgaagaact acaggcacag 29100
4338 taaaaaaaaat atggcgtatt atgtgaacta aaagagttct aaaggagttc ttaaaggagt 29160
4340 ggtagaattt gggtaggaaa gtgattaagt ccaacttaaa accaacagtc tcaaactgct 29220
4342 acaactacaa tgtccaatga gccactagcc acatgaggct atttaagtaa atttagttta 29280
4344 aaatccagtt ttcgaattac attagccaca ttgtcaagtg ttcaaatac aggtggttag 29340
4346 tggctactgt actgggcaac atacattata gaacattttc attataggaa gttttattgg 29400
4348 gcagtgtgtc tcttaaattc taccttccac tcaactccca tacaactttc ttttgatcat 29460
4350 tttgatactt tctacctaatt ggcagctctt ccaaaatagc tgctttaaac tctgatttaa 29520
4352 ttttcaatat ttggtttcat ttttcaacag gccaaagggc ctctggtaat gaagtgcatt 29580
4354 atatatatat atgatggagt ctactgtgtc tgcccaggct acagtgcagt ggctcgatct 29640
4356 tggctctctc caatctccgc cttgcagggt ttcaagcaat tctcctgect cagcctcctt 29700
4358 agtagctggg accacagaca tctgtcacca caccagcta actttttgta tttttggtag 29760
4360 agacgggggt tcgcatatt gactgggctg gtctcaaaact cctgacctca agtgatccac 29820
4362 ccaccttggg tcccaaagt gctgggatta atgctgtgag ccaccacact tggcctacat 29880
4364 tttttcttta tatccagaa catctataac aggcacctta tctactcatt agtgaagaga 29940
4366 taattggatt acacaggcag gcttgtttac tacatccaga atgtagaaac tgctttcttc 30000
4368 aacatcttgg ttctagctag taataacaat ataattcttt ggcagatatt cagaataaca 30060
4370 ttttaaaacta cattttctta gaaaattgca ttctttagt gagcagtgtg tggctctctt 30120
4372 tgttcagaat ttaaaaactg taaccaatga aagccttttc tcttattcct ctaccgtcat 30180
4374 ttacatgata atctgaagct aatatgacaa tatttaataa ctaagtggta ctagggaact 30240
4376 acaagaatac tgtaaagctt aagccattgt tatcactgtc atttagcatt taataacaaa 30300
4378 actatacaga attatgtgca taccaatgaa tgttttgtag catctagtta aattttttta 30360
4380 ataaagtttt atgggttaag cagaagacaa ctgtcatact gaattttatt aaaagtatat 30420
4382 atacttcaaa ttcaaagcat cccttaggac ccacagaata tattaaaact accaccctta 30480
4384 aattttatat ttttgcttta agacagacaa tgcaaaggta actggcaaga ggtgagcaaa 30540
4386 tgttttagaa catttatatt attgcttaaa atgagatttg aaattgtaat aaaattcttg 30600
4388 gttatgaagt ctgatgtctt ctttgagcac cagtttaaaa ggaaacattt caaacagtaa 30660
4390 aataaatcag tgtgtacttt attttgagcc aatgttttac ataagaccaa caaactaagt 30720
4392 gtgggcaaac tgttcaatca cttttgagaa attacatggg tcctatttag gtttgaaaaa 30780
4394 gtagtttgtt gccataacat cagaccttaa ggtgttttaa agtgtatcct aagggtactg 30840

```

RAW SEQUENCE LISTING

DATE: 06/16/2005

PATENT APPLICATION: US/10/537,839

TIME: 10:18:53

Input Set : A:\pto.da.txt

Output Set: N:\CRF4\06162005\J537839.raw

```
4396 acagaagaaa aatacagtgt tatggaagta tacacaactc atgaccacac agtatagatc 30900
4398 cattcatggt gaataatggt catctgttct ccaaaggtag tgaaaaatat taagtcatca 30960
4400 aataaatgct cagaattacc aaggaacagt taaaaaggac caggatccaa acagggttatt 31020
4402 tatatattta tctataaaca agtgacaaca ctaaaaaaca cattgaaaac cagtgtttta 31080
4404 aactctgaat gtgggattta aaaatattcc attaacttga gattgcaata atttttttaa 31140
4406 accaaatagc atttgactgg caagtctcat ataatttaca gctgtaatat tcctaaaagg 31200
4408 aatatctaca tactatagcc tatcaaatat aatctgcatt ttgcaaatac atacaaaaat 31260
4410 ctatccatca tttatacatt ttatatattat atacttttta aaaattagat tttattgcta 31320
4412 ggtgaatttg gaattcaaat taaatttgga aacttaataa tgctcttctc ataaccttct 31380
4414 ccccatctct tttttaattt ttaaacactg gaagcaaatg attatcaaaa tgagactgca 31440
4416 acttaaggca ttttaaaaga aaaaaataatt aggtgccata tagcatttta tttcaaaagt 31500
4418 atattttgtc ccacttttct cactagcaag agtaaaacac aaaccttttt tcataaatat 31560
4420 gactacagta atcataacac aaaaaagggt tgataggcat tgcttagata tttaaaacaa 31620
4422 gggtaatact ttcccactca cctaaaagaa aaaacctttt tgattaccag tttataaaca 31680
4424 tcggatttgc tatgttaaaa agtccagcag aatttttaatt cagcaacact ggagaatgaa 31740
4426 tatatatata caggcatata tgtgtatgta tatattcatt ttatatatag tcaatgtatt 31800
4428 tattaggcat tccccacaa aagtaattta tatttaattg ccatttttaa taaacactta 31860
4430 tgttcacaga tcatccatct gtcttatatg aagttaggca atatcaaatg tcctgttatg 31920
4432 gtctccgtct tcttcggaat catcctctga agctgttgaa agaaaacagg atgatcaaga 31980
4434 atgattttta ggggggataa aatgggaagt gtaaatatga agccagaaca gcaatgactt 32040
4436 gtaaaaacaa aaatcccaat ttagtatatt gtttgatcaa aatgataagt tgtatgacag 32100
4438 ggttaggggt gtctgcctgt gggtgatacc caaccacaat tctccccgcc cccacaccgt 32160
4440 tttgtaatgt tatatcaatt tttataaaaa tgaaagtgtc taaaaatgtg gttcaagagc 32220
4442 atcttctaaa atgtttctga gatcaatctg tgttcatagt agctaataat atataaacac 32280
4444 taggaaaaaa gtcaacttaa ggcaagtgtc ctcacacacc tgagtaaaat ctggcttatt 32340
4446 accgctgcat gtttggtgca tccgatgaga atgaaaagaa gtgtacatag aataagaggt 32400
4448 tatgggtggt cttgcaattt acatcaaagc tatgtctata caatgccaaag ataaaagttc 32460
```

E--> 4457 - 3 -

*Delete**see p. 13 for more error*

10/537,839 13

<210> 23
<211> 21
<212> DNA
<213> synthetic
<400> 23
gaccatggag cggacatgat a

invalid <213> response
see item 10 on
Erra Summary
Sheet

21



The types of errors shown exist throughout
the Sequence Listing. Please check subsequent
sequences for similar errors.

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/537,839

DATE: 06/16/2005

TIME: 10:18:54

Input Set : A:\pto.da.txt

Output Set: N:\CRF4\06162005\J537839.raw

L:10 M:270 C: Current Application Number differs, Replaced Current Application No
L:10 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:28 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:1,Line#:25
L:1231 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:4,Line#:1229
L:1609 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:7,Line#:1606
L:1810 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:10,Line#:1807
L:1812 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:48
M:341 Repeated in SeqNo=10
L:1901 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11 after pos.:0
M:341 Repeated in SeqNo=11
L:2010 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 after pos.:0
L:2040 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:14,Line#:2037
L:2069 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:16,Line#:2067
L:2096 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:18,Line#:2094
L:2125 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:20,Line#:2123
L:4457 M:254 E: No. of Bases conflict, this line has no nucleotides.

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ BLACK BORDERS
- ☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
- ☐ FADED TEXT OR DRAWING
- ☒ BLURRED OR ILLEGIBLE TEXT OR DRAWING
- ☐ SKEWED/SLANTED IMAGES
- ☐ COLOR OR BLACK AND WHITE PHOTOGRAPHS
- ☐ GRAY SCALE DOCUMENTS
- ☒ LINES OR MARKS ON ORIGINAL DOCUMENT
- ☒ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
- ☐ OTHER: _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.